Wednesday, January 18th

- Please take out the 3 solving systems of equation questions from yesterday (out of 12). We are marking them together.
- For the rest of today, tomorrow, and Friday we will be reviewing for the exam (completing the review will be worth 40 marks - 20 marks for each review sheet)

- Your exam will consist of: 40 MC and Short Answer Questions worth a total of 85 (Overall Total = 125)
- Your exam is worth 30% of your overall mark.

- Your review sheets cover the majority of what will be on your exam, however remember you will be tested on all the material covered this year, therefore you should make sure that you look over all of your notes/old tests or quizzes/our wikispace/etc.

PRACTICE

Solve each system of equations:

① Using graphing

$x = 6 - 4y$

$2x - y = 3$

② Using substitution

$2x - 3y = 13$

$4x + y = 5$

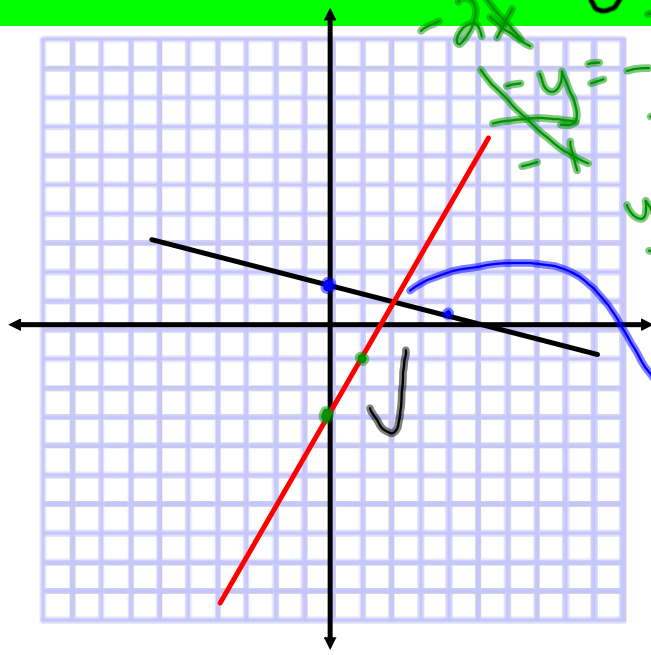
③ Using ~~addition / subtraction~~ Elimination Method

$3x - y = 3$

$4x + 2y = 14$

① Using graphing $x = 6 - 4y$

$2x - y = 3$



$6 - 4y = x$

$-6 \quad -6$

$\frac{-4y}{-4} = \frac{x - 6}{-4}$

$y = -\frac{1}{4}x + 1.5$

$-2x \quad -2x$

$\frac{-y}{-1} = \frac{-2x + 3}{-1}$

$y = 2x - 3$

(2, 1)

② Using substitution

$y = \frac{2}{3}x - \frac{13}{3}$

$2x - 3y = 13$

$4x + y = 5$

$-4x \quad -4x$

$y = -4x + 5$ ✓

$2x - 3y = 13$

$2x - 3(-4x + 5) = 13$

$2x + 12x - 15 = 13$

$14x - 15 = 13$

$+15 \quad +15$

$\frac{14x}{14} = \frac{28}{14}$ ✓

$x = 2$

$y = -4(2) + 5$

$y = -8 + 5$ ✓

$y = -3$

$(2, -3)$ ✓

#3 Using the Elimination Method

$3x - y = 3$ $\times 2$ ✓

$4x + 2y = 14$

$6x - 2y = 6$

$+ \quad 4x + 2y = 14$

$10x = 20$

$\frac{10x}{10} = \frac{20}{10}$ ✓

$x = 2$

$3x - y = 3$

$3(2) - y = 3$

$6 - y = 3$

$-6 \quad -6$

$-y = -3$

$\frac{-y}{-1} = \frac{-3}{-1}$ ✓

$y = 3$

$(2, 3)$ ✓

4

$\frac{6}{12}$ $\frac{12}{12}$

NRF 10 Review Sheet 1 s

Chapter 3 - Factors and Products

1) a) Using a factor tree, find the prime factors of 88 and 120.
   b) Find the greatest common factor.
   c) Find the least common multiple.

2) The volume of a cube is 2197 cm^3. What is the area of the cube?

3) Factor the following:

a) $16x^2y^3 + 12xy^4$ b) $x^2 + 7x + 10$ c) $2x^2 - 7x + 6$ d) $4x^2 - 36y^2$

4) Expand and simplify.

a) $(x + 6)(x - 3)$ b) $(x + 3)(x - 3)$ c) $(2x - 1)(x + 2)$

d) $(4x + 3)(2x - 4)$ e) $(x + 3)(3x^2 + 4x + 1)$ f) $(x + 5)^2$

5) Expand, $(x + 4)(x + 2)$, using an algebra tile diagram and state the answer in simplified form.

Chapter 4 - Roots and Powers

6) Copy and complete the following table.

Number	Natural	Whole	Integer	Rational	Irrational	Real
5.6						
-4						
1.247...						
8						

7) Write each radical in simplest form.

a) $\sqrt{80}$ b) $\sqrt{28}$ c) $\sqrt[3]{56}$ d) $\sqrt[3]{135}$

8) Write each mixed radical as an entire radical.

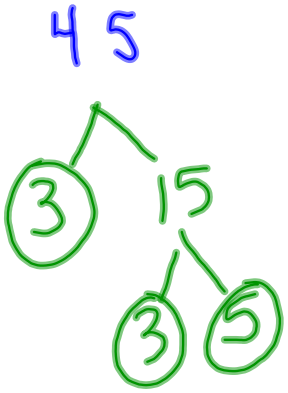
a) $5\sqrt{3}$ b) $6\sqrt{5}$ c) $2\sqrt[3]{3}$ d) $5\sqrt[3]{6}$

9) Evaluate each power without using a calculator.

a) $27^{2/3}$ b) $(-64)^{-2/3}$ c) $36^{-1/2}$ d) $(9/16)^{3/2}$

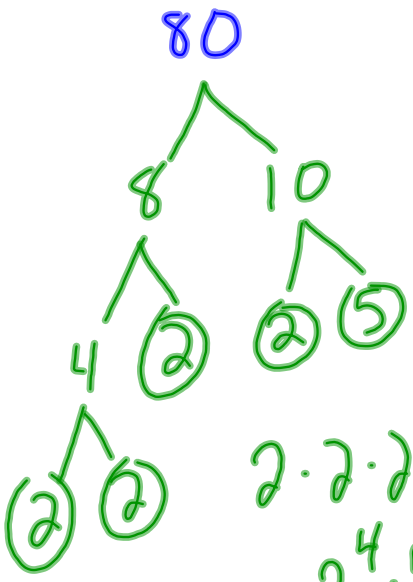
10) Simplify and express answers with positive exponents.

a) $(4x^2y^4)^{-1/2}$ b) $(x^3y^4)(x^{-5}y^3)$ c) $\frac{16^{3/4}}{16^{-1/2}}$ d) $\frac{(x^3y)^2}{(xy^{-2})^{-3}}$



$3 \cdot 3 \cdot 5$

$3^2 \cdot 5$

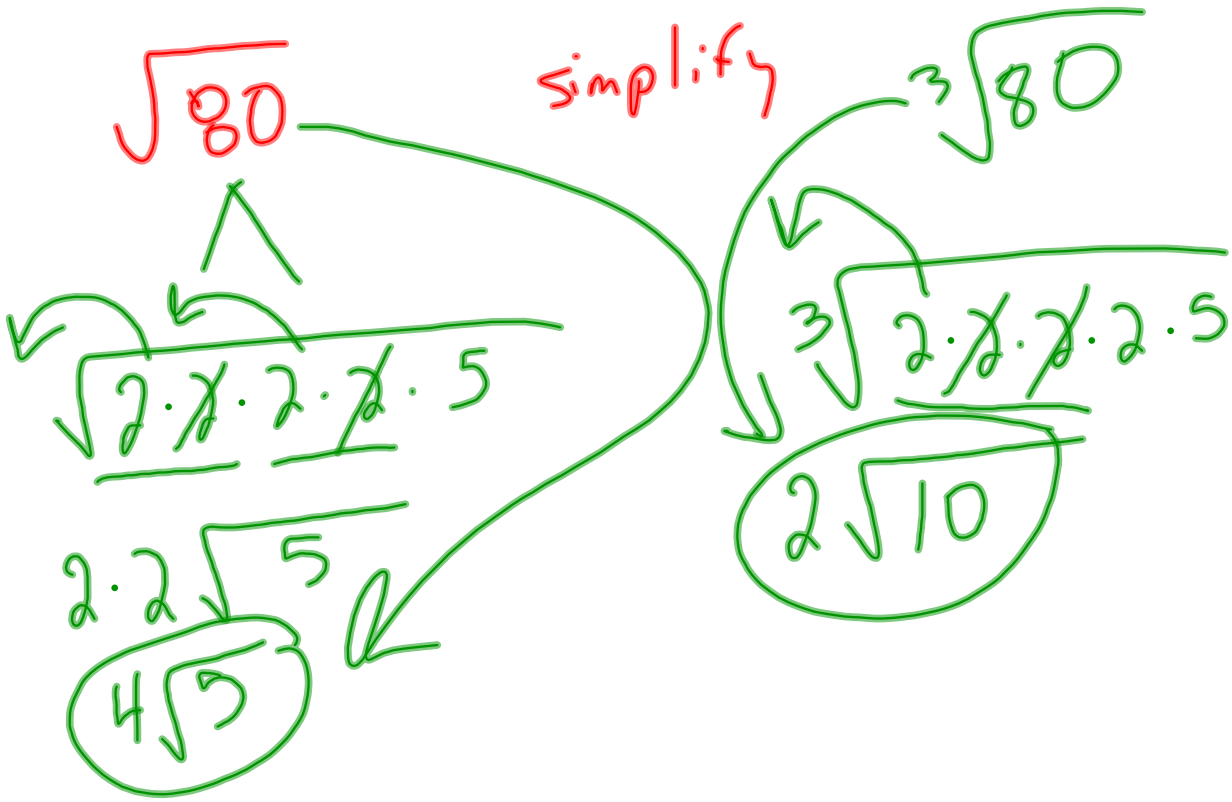


$2 \cdot 2 \cdot 2 \cdot 2 \cdot 5$

$2^4 \cdot 5$

GCF = 5

LCM = $2^4 \cdot 3^2 \cdot 5 = 16 \cdot 9 \cdot 5 = 720$


simplify

NRF 10 Review Sheet 2

Chapter 5 - Relations and Functions

1) For the following set of ordered pairs, answer the following:

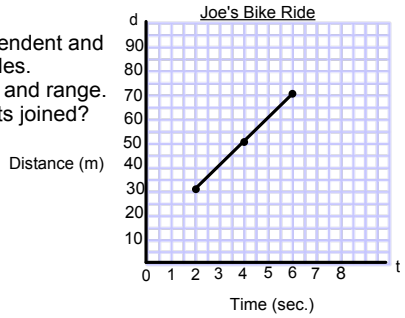
(2,3), (3, 6), (4,9), (2,12)

a) Is this set of ordered pairs a function? Explain.
b) State the domain and range.

2) The function P(n) = 7n - 250 describes the profit, P dollars, for a school dance wher n students attend.

a) Identify the dependent variable.
b) Calculate the value of P(200). What does this number represent?
c) Calculate the value on n when P(n) = 1290. What does this number represent?

3) For the graph below:
a) Identify the independent and dependent variables.
b) Write the domain and range.
c) Why are the points joined?



4) a) Calculate the rate of change for the graph in question 3 above.
b) What does the rate of change represent?

Chapter 6 - Linear Functions

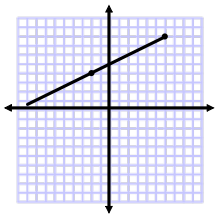
5) a) Explain why a horizontal line has a slope of zero.
b) Explain why a vertical line has a slope that is undefined.

6) The coordinates of two points on two lines are given. Without graphing, are the two lines parallel, perendicular, or neither? Explain.

A(-4, -2), B(-1, 7) and X(2, 5), Y(4, -1)

7) Graph: a) y = -2x + 4 b) y - 2 = 3(x + 1)

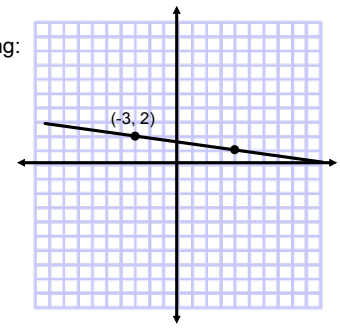
8) a) Provide the slope-intercept equation for the following graph.
b) Verify the equation.



9) Graph 2x - 4y + 16 = 0.

10) For the following graph, provide the following:

a) slope-point equation
b) slope-intercept equation
c) general equation



11) a) Solve the system of equations below by graphing.
2x - y = -5 and 4x + y = -7

b) Solve the system of equations below by substitution.
7x + y = 10 and 3x - 2y = -3

c) Solve the system of equations below by elimination.
-3x - y = 5 and 2x + y = -5